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Reformatting of the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.(Original) A method of analyzing a communication network comprising:
determining a mean drop rate in a device x by polling each device from a network management computer (NMC) which is in communication with the network, and processing signals in the NMC to determine a drop rate $D(x)$, in accordance with:

$$D(x) = ((L + (x) - L - (x)) / 2,$$

$$\text{and } L(x) = 1 - A(x)$$

where

$A(x)$: the fraction of poll requests from the NMC to device x for which for NMC receives replies (measured over the last M sampling periods), (wherein x must not be broken),

$D(x)$: the mean frame drop rate in device x,

$L(c)$: NMC's perception of the loss rate to device x and back,

$L-(x)$: the NMC's perception of the mean value of $L(z)$ for all devices z connected to device x, closer to the NMC than device x and which are not broken, and

$L+(x)$: the NMC's perception of the mean value of $L(z)$ for all devices z connected to device x, further away from the NMC than device x and which are not broken.

2.(Original) A method of an analyzing a communication network comprising determining a mean frame transit delay in a device x by polling each device from a network management computer (NMC) which is in communication with the network and processing signals in the NMC to determine a transit delay $T(x)$ in accordance with the process:

$$T(x) = ((w + (x) - W - (x)) / 2$$

where

$T(x)$: the mean frame transit delay for device x , (wherein device x must not be broken),

$W(x)$: the mean round trip time taken between a poll request from the NMC to device x and the receipt of the reply by the NMC (measured over the last N sampling periods),

$W-(x)$: The NMC's perception of the mean value of $W(z)$ for all devices z connected to device x , closer to the NMC than device x and which are not broken,

$W+(x)$: The NMC's perception of the mean value of $W(z)$ for all devices z connected to device x , further away from the NMC than device x and which are not broken.

3. (Currently Amended) A method of analyzing a communication network comprising determining a breakstate of communication devices connected in the network, by polling each device from a network management computer (NMC) which is in communication with the network, and processing signals in the NMC in accordance with at least [one] two of:

- (a)
 - (i) receiving no replies to polling signals directed to a device,
 - (ii) receiving no replies from devices lying beyond said device,
 - (iii) detecting no traffic flowing in any lines to or from said device,
 - (iv) detecting changes to line status bits on lines connected to said device;
- (b)
 - (i) determining zero traffic on a line and a device being otherwise determined as not being broken, declaring the line as being broken,
 - (ii) declaring a line as being broken in step (b) (i) after a predetermined period of time, and
- (c) processing steps (a) and (b) with lines having more than two ends, as if it were a single device from the point of view of breaks.